

Ouray National Wildlife Refuge Vegetation Mapping Project

V.A.5.N.1.9. *TYPHA (ANGUSTIFOLIA, LATIFOLIA) - (SCHOENOPLECTUS SPP.) SEMIPERMANENTLY FLOODED HERBACEOUS ALLIANCE*

(Narrowleaf Cattail, Broadleaf Cattail) - (Clubrush species) Semipermanently Flooded Herbaceous Alliance

Alliance Identifier: A.1436

Typha latifolia Western Herbaceous Vegetation

Broadleaf Cattail Western Herbaceous Vegetation

Broadleaf Cattail Marsh

ELEMENT CONCEPT

GLOBAL SUMMARY: This association is widespread across the western United States and western Great Plains occurring near streams, rivers, and ponds. The soil is flooded or saturated for at least part of the growing season. The dominant species, *Typha latifolia*, often forms dense, almost monotypic stands. *Carex* spp. and *Schoenoplectus* spp. are often found in this community, especially on the margins.

ENVIRONMENTAL DESCRIPTION

USFWS WETLAND SYSTEM: PALUSTRINE

Ouray National Wildlife Refuge Environment: *Typha latifolia* Herbaceous Vegetation grows best where active seeps and springs, or surface and/or ground water flow is available. As a result, broad-leaved cattail are less abundant on the Refuge than are narrow-leaved cattail, which tolerate sites with standing and more alkaline waters. Broad-leaved cattail stands on the Refuge occupied sites with active seeps and flowing water, and the soils were inundated muck. These stands are dissected by mule deer trails and bedding sites are present.

Global Environment: This widespread community is found along streams, rivers, canals, and the banks of ponds and lakes. Elevations range from near sea level to 2000 m. Sites are nearly level. The soil is saturated or flooded for much of the year from freshwater sources such as springs or streams. The alluvial soils have variable textures ranging from sand to clay and usually with a high organic content.

VEGETATION DESCRIPTION

Ouray National Wildlife Refuge Vegetation: Broad-leaved cattail stands are nearly monotypic, approaching 90% foliar cover. Of this amount, from 70-80% foliar cover is provided by *Typha latifolia*, while the remainder is contributed by *Epilobium ciliatum*, *Lepidium latifolium*, *Lemna minor*, *Muhlenbergia asperifolia*, *Veronica anagallis-aquatica*, *Mentha arvensis*, *Sonchus oleraceus*, and *Onopordum acanthium*. Broad-leaved cattail are very tall on the Refuge, reaching from 3-4 m in height.

Global Vegetation: This community is dominated by hydrophytic macrophytes, especially *Typha latifolia*, which grow from approximately 2-3 m tall. *Typha latifolia* often forms dense, near-monotypic stands (70-98% cover), almost to the exclusion of other species. Other species typical of wetlands may be found in lesser amounts in this community; among these are shallower water emergents such as *Carex* spp., *Eleocharis macrostachya*, *Eleocharis palustris*, *Glyceria* spp., *Juncus balticus*, *Juncus torreyi*, *Mentha arvensis*, *Schoenoplectus acutus*, and *Veronica* spp. In deeper water, *Lemna minor*, *Potamogeton* spp., *Sagittaria* spp., *Azolla filiculoides*, and other aquatics may be present in trace amounts. Trace amounts of grasses like *Agrostis stolonifera*, *Beckmannia syzigachne*, *Hordeum jubatum*, *Muhlenbergia asperifolia*, and *Phalaris arundinacea* may also be present.

Dynamics: This association is dependent on flooding and high water tables from flowing freshwater sources, such as streams and seeps, and does not grow well in alkaline or stagnant water (Von Loh 2000). Disturbance greatly increases the total number of species present (Hansen et al. 1995). *Typha* spp. produce abundant wind-dispersed seeds that allow them to colonize wet bare soil sites quickly and to survive under wet conditions (Muldavin et al. 1999, Hansen et al. 1995).

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MOST ABUNDANT SPECIES

Ouray National Wildlife Refuge
Stratum **Species**
HERBACEOUS

Typha latifolia, *Lepidium latifolium*, *Epilobium ciliatum*, *Lemna minor*

Global
Stratum **Species**
HERBACEOUS

Typha latifolia

CHARACTERISTIC SPECIES

Ouray National Wildlife Refuge
Species

Typha latifolia, *Epilobium ciliatum*, *Veronica anagallis-aquatica*, *Muhlenbergia asperifolia*, *Lemna minor*

Global
Species

Typha latifolia

OTHER NOTEWORTHY SPECIES

Ouray National Wildlife Refuge
Stratum **Species**
N/A

Global
Stratum **Species**
N/A

OURAY NATIONAL WILDLIFE REFUGE SIMILAR ASSOCIATIONS:

Typha domingensis Herbaceous Vegetation

GLOBAL SIMILAR ASSOCIATIONS:

Schoenoplectus acutus - *Typha latifolia* - (*Schoenoplectus tabernaemontani*) Sandhills Herbaceous Vegetation (CEGL002030)--occurs in Great Plains, but is codominated by *Schoenoplectus* spp.

Typha (*angustifolia*, *domingensis*, *latifolia*) - *Schoenoplectus americanus* Herbaceous Vegetation (CEGL002032)--occurs in Great Plains, but is codominated by *Schoenoplectus* spp.

Typha latifolia - *Equisetum hyemale* - *Carex* (*hystericina*, *pellita*) Seep Herbaceous Vegetation (CEGL002033)--occurs in Great Plains, but is codominated by *Equisetum* and *Schoenoplectus* spp.

Typha latifolia Southern Herbaceous Vegetation (CEGL004150)--occurs in the southern Great Plains and is very similar, but has not been reported further west than Arkansas, Oklahoma and Texas; further review is needed to clarify differences.

SYNONYMY:

Typha latifolia Community (Kovalchik 1993)

Typha latifolia Community (Crowe and Clausnitzer 1997)

Typha latifolia wetlands (Titus et al. 1996)

Typha latifolia community type (Kunze 1994) B

Typha latifolia community type (Dethier 1990)

Typha latifolia Wetland (Baker 1984a)

Typha latifolia Plant Association (Bundy et al. 1996)

Typha latifolia Habitat Type (Hansen et al. 1995)

Coastal and Valley Freshwater Marsh (Holland 1986b)

Cattail (*Typha* sp.) Dominance Type (Jones and Walford 1995)

Typha angustifolia - *Typha latifolia* Plant Association (Kittel et al. 1999)

Typha latifolia/*Sagittaria latifolia* plant association (Johnston 1987)

Typha latifolia Community Type (Padgett et al. 1989)

CLASSIFICATION COMMENTS

Ouray National Wildlife Refuge: N/A

Global Comments: This community is a common element found in many wetland systems, but has received little attention. Consequently, the diagnostic features and species of this community are not well known. Some ecologists (Hansen et al. 1995, Kittel et al. 1999) have included *Typha angustifolia* as a codominant in this association. More classification work is needed to clarify the concept of this association.

ELEMENT DISTRIBUTION

Ouray National Wildlife Refuge Range: *Typha latifolia* Herbaceous Vegetation is present in drainages, canals, ditches, basins, side channels, on seeps, and along the Green River channel throughout the Refuge. Broad-leaved cattail grows best on/in fresh to slightly alkaline water sources, particularly when flowing water and active seeps are present.

Global Range: *Typha latifolia* Herbaceous Vegetation is widely distributed, occurring across the western United States and western Great Plains.

Nations: CA? US

States/Provinces: AZ BC? CA CO ID MT NM NV OR UT WA WY

TNC Ecoregions: 10:C, 11:C, 17:C, 19:C, 20:C, 27:C, 2:C, 6:C

USFS Ecoregions: 261A:CC, 262A:CC, 263A:CC, 331C:CC, 331H:CC, 331I:CC, 341C:CC, 342:C, M331F:CC, M333C:CC

Federal Lands: USFWS (Ouray)

ELEMENT SOURCES

Identifier: CEGL002010 **Confidence:** 2 **Conservation Rank:** G5

REFERENCES: Baker 1984a, Bundy et al. 1996, Bunin 1985, Christy 1973, Crowe and Clausnitzer 1997, Dethier 1990, Hansen et al. 1991, Hansen et al. 1995, Holland 1986b, Kittel et al. 1996, Kovalchik 1993, Kunze 1994, Lindauer 1978, Lindauer and Christy 1972, Masek 1979, McEachern 1979, Muldavin et al. 1993b, Padgett et al. 1989, Ramaley 1939b, Titus et al. 1996, Tolstead 1942, Von Loh 2000, Youngblood et al. 1985a.